

Application No.: 10/549,771
Amendment Dated: January 6, 2010
Reply to Office Action of: October 8, 2009

MAT-8742US

Remarks/Arguments:

Claims 1-6, 8, and 9 are presently pending. Claim 7 has been cancelled without prejudice. Claims 1, 5, and 6 have been amended. Reconsideration of claims 1-6 and 8-9 is respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-5

Page 2 of the Office Action sets forth "Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funahashi (US PGPub 2003/0185415)...in view of Proni (US Patent 5,734,132...)." Applicant respectfully submits that this rejection is overcome by the amendments to the claims for the reasons set forth below.

Applicant's invention, as recited by claim 1, includes features which are not disclosed, taught, or suggested by the cited art, namely:

... a diaphragm...

... a suspension holder ... integrally formed with the diaphragm ...

This means that the suspension holder is integrally formed with the diaphragm. This feature is found in the originally filed application at page 4, lines 18-19; and page 5, lines 1-21. No new matter is added.

Funahashi is directed to a speaker. As illustrated in FIG. 7, for example, Funahashi discloses a speaker including a diaphragm 17 and a suspension holder 25. Part of the suspension holder 25 is coupled with a middle section of the diaphragm 17 using an adhesive. See Funahashi at paragraph [0053] and FIG. 7.

Proni is directed to a concentric tube suspension system for loudspeakers. As illustrated in FIG. 3, for example, Proni discloses a loudspeaker 10 including a diaphragm 12 and a stabilizer 40. Proni discloses that the diaphragm includes a cylindrical elbow 15. The stabilizer 40 is attached to the diaphragm 12 at the

cylindrical elbow 15 using adhesive. See Proni at column 5, line 35 to column 6, line 22.

Funahashi fails to disclose, teach, or suggest forming suspension holder 25 integrally with diaphragm 17. Likewise, Proni fails to disclose, teach, or suggest forming stabilizer 40 integrally with diaphragm 12. This is different from the claimed invention because claim 1 requires a suspension holder that is integrally formed with the diaphragm.

Accordingly, Applicant respectfully submits that Funahashi in view of Proni fails to disclose, teach, or suggest "a suspension holder...integrally formed with the diaphragm," as recited in claim 1.

It is because Applicant's claimed invention includes a suspension holder integrally formed with the diaphragm that the following advantages are achieved. "Thereby, adhesion work between the suspension holder and the diaphragm as well as heating and drying work of adhesive are not required, thus providing a special effect of enabling the productivity to be considerably improved and production equipment and space to be reduced." See the originally filed application at page 5, lines 9-13.

Accordingly, for the reasons set forth above, claim 1 is allowable over the cited prior art. Therefore, withdrawal of the rejection and allowance of claim 1 is respectfully requested.

Claims 2-4 include all of the features of claim 1, from which they depend. Thus, claims 2-4 are also allowable over the cited prior art for at least the reasons set forth above with respect to claim 1. Therefore, withdrawal of the rejection and allowance of claims 2-4 is respectfully requested.

Applicant's invention, as recited by claim 5, includes features which are not disclosed, taught, or suggested by the cited art, namely:

... a diaphragm ... including an engaging portion
integrally formed with the diaphragm ...

... a suspension holder ... integrated with the diaphragm
via a coupling portion which engages the engaging
portion ...

This means that the diaphragm includes an engaging portion integrally formed with the diaphragm. A suspension holder is integrated with the diaphragm via a coupling portion which engages the engaging portion. This feature is found in the originally filed application at page 5, line 25 to page 6, line 6; and FIG. 3. No new matter is added.

The Office Action sets forth that the inner cone 12'' of Proni corresponds to the engaging portion of claim 5. Applicant respectfully disagrees. As shown in FIG. 9A of Proni, for example, stabilizer 40 does not engage inner cone 12''. Instead, stabilizer 40 engages outer annular trough 78 of adaptor ring 70. See Proni at column 9, lines 49-67, and FIG. 9A.

Further, Proni fails to disclose, teach, or suggest that adaptor ring 70 is integrally formed with either outer skin 12' or inner cone 12''. Instead, Proni discloses that the top surface 74 of adaptor ring 70 is adhered to inner cone 12''. This is different from the claimed invention because claim 1 requires a coupling portion of the suspension holder to engage an engaging portion that is integrally formed with the diaphragm.

Accordingly, Applicant respectfully submits that Funahashi in view of Proni fails to disclose, teach, or suggest "a diaphragm...including an engaging portion integrally formed with the diaphragm...[and] a suspension holder...integrated with the diaphragm via a coupling portion which engages the engaging portion," as recited in claim 5.

It is because Applicant's claimed invention includes a diaphragm including an engaging portion integrally formed with the diaphragm and a suspension holder integrated with the diaphragm via a coupling portion which engages the engaging portion that the following advantages are achieved. "[B]y engaging suspension holder 13 into engaging portion 12a provided on the rear surface of diaphragm 12, accurate positioning can be carried out." See the originally filed application at page 6, lines 24-26.

Accordingly, for the reasons set forth above, claim 5 is allowable over the cited prior art. Therefore, withdrawal of the rejection and allowance of claim 5 is respectfully requested.

Claims 6 and 8

Pages 4-5 of the Office Action sets forth "Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funahashi...in view of Albinger (US Patent 4,029,911...) in view of Proni...." Applicant respectfully submits that this rejection is overcome by the amendments to the claims for the reasons set forth below.

Claim 7 has been cancelled without prejudice, thus obviating the rejection of claim 7.

Claim 6 includes features similar to the allowable features discussed above with respect to claim 1. Specifically, claim 6 recites "integrally molding the diaphragm and the suspension holder...." Additionally, claim 8 includes all of the features of claim 1, from which it depends. Applicant respectfully submits that the addition of Albinger fails to make up for the deficiencies of Funahashi and Proni with respect to claim 1.

Albinger is directed to an electro-acoustic transducer. As illustrated in FIG. 1, for example, Albinger discloses a transducer 1 including a vibratory cone 14 and a centering ring 15. See Albinger at column 3, lines 56-63. Albinger fails to disclose, teach, or suggest forming centering ring 15 integrally with vibratory cone 14.

Accordingly, Applicant respectfully submits that Funahashi in view of Proni and Albinger fails to disclose, teach, or suggest "a suspension holder...integrally formed with the diaphragm," as recited in claim 1.

As described above, claim 6 includes features similar to the allowable features discussed above with respect to claim 1. Accordingly, for the reasons set forth above with respect to claim 1, claim 6 is allowable over the cited prior art. Therefore, withdrawal of the rejection and allowance of claim 6 is respectfully requested.

As described above, claim 8 includes all of the features of claim 1, from which it depends. Thus, claim 8 is also allowable over the cited prior art for at least the reasons set forth above with respect to claim 1. Therefore, withdrawal of the rejection and allowance of claim 8 is respectfully requested.

Claim 9

Pages 7 of the Office Action sets forth "Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Funahashi...in view of Albinger...in view of Proni...in view of Sato et al. (US Patent 5,793,002...)." Applicant respectfully submits that this rejection is overcome by the amendments to the claims for the reasons set forth below.

Claim 9 includes all of the features of claim 1, from which it depends. Applicant respectfully submits that the addition of Sato fails to make up for the deficiencies of Funahashi, Proni, and Albinger with respect to claim 1.

Sato is directed to a loudspeaker diaphragm. Sato discloses a vibrating diaphragm 1 manufactured from polypropylene resin. See Sato at column 3, lines 32-38. Sato fails to disclose, teach, or suggest forming a suspension holder integrally with the vibrating diaphragm 1.

Accordingly, Applicant respectfully submits that Funahashi in view of Proni, Albinger, and Sato fails to disclose, teach, or suggest "a suspension holder...integrally formed with the diaphragm," as recited in claim 1.

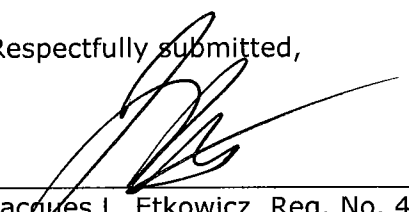
As described above, claim 9 includes all of the features of claim 1, from which it depends. Thus, claim 9 is also allowable over the cited prior art for at least the reasons set forth above with respect to claim 1. Therefore, withdrawal of the rejection and allowance of claim 9 is respectfully requested.

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In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,



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Dated: January 6, 2010

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